

Fractured Coastline

Evidence of dramatic earth movement is visible all around you: split rocks, steep cliffs, and even cracks in the asphalt. The rocks are ocean floor sediments deposited over 150 million years ago, which have been shoved up along the coastline. Off the coast looms the Cascadia Subduction Zone, where two tectonic plates are in a head-on collision.

The sea floor (Gorda Plate) is slowly moving inland like a large conveyor belt, pulled down by gravity under the edge of the North American Plate. The edge of the continent acts like a bulldozer blade and scrapes off slivers of ocean floor to form rocks that are folded and faulted, then thrust up to become sea cliffs. This geologic setting—the offshore areas of the parks—produces the strongest earthquakes on earth.

